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(54) **SYSTEM TO MANAGE CONSTELLATION OF SATELLITES**

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(57) **ABSTRACT**

A constellation of many satellites provide communication between devices such as user terminals (UTs) and ground stations that are connected to other networks, such as the Internet. A constellation management system (CMS) facilitates management and operation of the satellites in the constellation and facilitates information exchange with other authorized systems to provide for situationally aware operation. The CMS may ingest data such as satellite telemetry, space weather data, object ephemeris data about other orbital objects, and so forth. The CMS uses the ingested data to automatically operate satellites to perform routine activities such as station keeping maneuvers, maintenance activities, interference mitigation, and so forth. Confirmation from a human operator may be obtained before performing some activities. Activities may be planned and coordinated to minimize resource consumption for the individual satellite as well as the constellation. Output, such as ephemeris data, may be provided to other parties as well.